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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) An optical transmitter for generating optically labeled packets comprising:

a phase modulator driven by a payload signal to provide DPSK modulation of a payload portion of optically labeled packets; and

an intensity modulator coupled to the phase modulator, the intensity modulator being driven by a label signal to provide ASK modulation of a label portion of optically labeled packets;

wherein said payload signal is at a higher speed than said label signal.

2. (original) The transmitter of claim 1 wherein the phase modulator and the intensity modulator are modulators selected from the group consisting of a Mach-Zehnder modulator, a single-waveguide modulator or an electro-absorption modulator.

3. (original) The transmitter of claim 1 wherein the payload signal is a high speed signal having a data rate of greater than about 2.5Gb/s and the label signal is a low speed signal having a data rate of less than about 1/4 of the data rate of the payload signal.

4. (original) The transmitter of claim 1 wherein the extinction ratio of the ASK modulation is between about 2 dB and about 8 dB.

5. (original) The transmitter of claim 1 further comprising a differential encoder coupled to the phase modulator.

6. (currently amended) A system comprising:

a transmitter for generating optically labeled packets, the transmitter including

a phase modulator driven by a payload signal to provide DPSK modulation of a payload portion of the optically labeled packets; and

an intensity modulator coupled to the phase modulator, the intensity modulator being driven by a label signal to provide ASK modulation of a label portion of the optically labeled packets;

wherein said payload signal is at a higher speed than said label signal.

7. (original) The system of claim 6 further comprising a receiver including a balanced detector for detection of the DPSK modulated payload portion of the optically labeled packets.

8. (original) The system of claim 6 further comprising a wavelength converter for providing wavelength conversion of the optically labeled packets using a four-wave-mixing process while maintaining the phase and amplitude of the optically labeled packets.

9. (original) The system of claim 6 further comprising ~~a label processor~~ means adapted to provide label insertion, label removal and/or label reading.

10. (currently amended) A system for transmission of optically labeled packets comprising:

a transmitter including at least two modulators adapted to provide DPSK modulation of a payload portion of optically labeled packets and ASK modulation for a label portion of the optically labeled packets; and

a receiver including a balanced detector for detection of the payload portion of the optically labeled packets;

wherein said payload portion is at a higher speed than said label portion.

11. (currently amended) A communication method for transmission of optically labeled packets comprising the step of:

modulating light from a laser source using DPSK modulation to carry payload information and ASK modulation to carry label information, wherein said payload information is at a higher speed than said label information.

12. (original) The method of claim 11 further comprising receiving the optically labeled packets using a balanced detector to detect the payload portion of the optically labeled packets.

13. (original) The method of claim 11 wherein modulating the light from the laser source is performed using a phase modulator and an intensity modulator, the modulators selected from the group consisting of a Mach-Zehnder modulator, a single-waveguide modulator or an electro-absorption modulator.

14. (original) The method of claim 11 wherein the payload of the optically labeled packets contains high speed data at a data rate of greater than about 2.5Gb/s, and the label contains low speed data at a data rate of less than about 1/4 of the data rate of the payload.

15. (original) The method of claim 11 wherein the extinction ratio of the ASK modulation is between about 2 dB and about 8 dB.

16. (canceled)

17. (currently amended) An optical transmitter comprising:

a first modulator means driven by a payload signal to provide DPSK modulation of a payload portion of optically labeled packets; and

an second modulator means coupled to the first modulator means, the second modulator means being driven by a label signal to provide ASK modulation of a

label portion of optically labeled packets;

wherein said payload signal is at a higher speed than said label signal.

18. (currently amended) A communication system for transmission of optically labeled packets comprising:

means for modulating light from a laser source using DPSK modulation to carry payload information and ASK modulation to carry label information;

wherein said payload information is at a higher speed than said label information.